

**IMMUNOMODULATORY PEPTIDES DERIVED FROM  
HEAT SHOCK PROTEINS AND USES THEREOF**

**ABSTRACT OF THE INVENTION**

A method of modulating an immune response in a subject is disclosed. The invention is based on the discovery that an effective therapeutic strategy for ameliorating the inflammation-related symptoms of an immune-mediated disease, such as arthritis, can be achieved by modulation of the underlying immune response itself, rather than by merely addressing the resulting inflammation. This strategy can be used to regulate the inflammatory response and is applicable to a variety of contexts in which immune modulation is desired, such as mucosal tolerization, DNA vaccination, anergy induction, active immunization, and ex vivo modulation of antigen-specific T cells. In one embodiment, the method comprises administering to the subject a bacterial dnaJ peptide or a human homolog or a non-homologous human isoform thereof.